



HOYA NEW

A photo taken in Samoa. Hoyas on beach center left

Oh There it is !

A pdf publication devoted to the Genus

Hoya ISSN 2329-7336

Volume 5 Issue 2

December 2015

Editor:
Dale Kloppenburg

Contents

When a species is collected from the wild, I feel it is wise to identify it, propagate it and name it. In this way it will eventually get it into commercial channels, be distributed to all those interested in this genus and thus be preserved. If in the future the species is lost through natural causes or forest destruction it will still be here on earth in your collection.

Please note Mary Ann O. Cajano died 6 Dec. 2015 after a short illness. She was an avid collector and student of the Genus Hoya. She will certainly be missed by all of us.

The following new species are presented in PDF format with ISSN number.

1. **Hoya palawanensis subsp. minora** Kloppenburg. Here republished since it was inadvertently published previously before the sp. was published
2. **Hoya litii** Kloppenburg, Siar & Cajano
3. **Hoya leticiae** Kloppenburg, Cajano & Hadsall
4. **Hoya edwinofernandoi** Kloppenburg, Cajano & Hadsall
5. **Hoya williamoliveriana** Kloppenburg, Cajano & Hadsall
6. **Sarcostemma malampayae** Kloppenburg, Cajano & Hadsall

Hoya palawanensis subsp. minora Kloppenburg 2015

ISSN 2329-7336

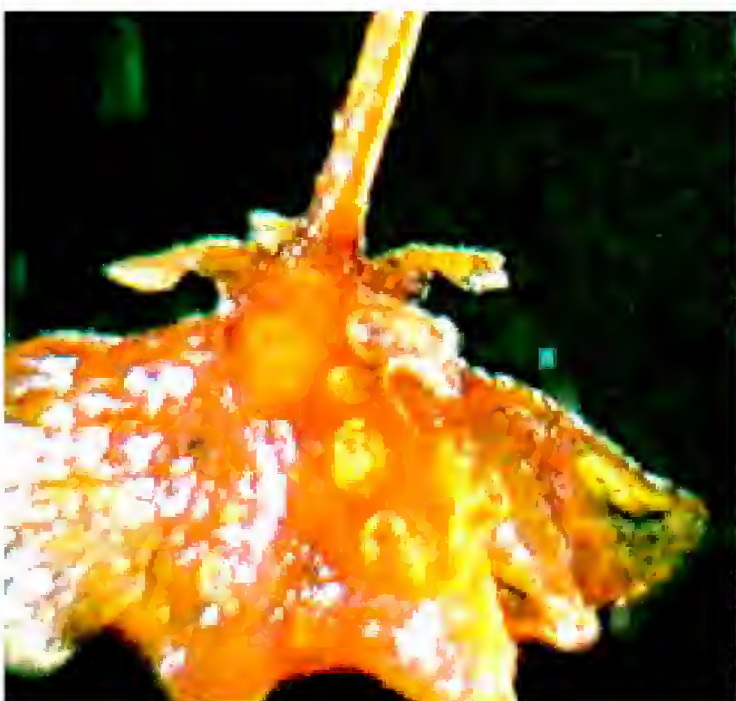
Hoya palawanensis subsp. minora Kloppenburg, holotypus CAHUP #5297 hic designatus, similes sp, sed sepala non triangularis, et 0.13 cm x 0.10 cm contrastre 0.25 cm x 0.15 cm et apex sub-rotundus et ovaria brevior; corolla diametro complanatus 1.10 cm contrastre 1.56 cm, aliter similes.

This subspecies is similar to the species namely in the pollinaria and anther wing type but in most parts a little smaller, the sepals have rounded apices not triangular in shape and are 0.13 x 0.10 cm versus 0.25 x 0.15 cm and the corolla diameter flattened is 1.10 cm versus 1.56 cm much smaller otherwise the parts are similar.

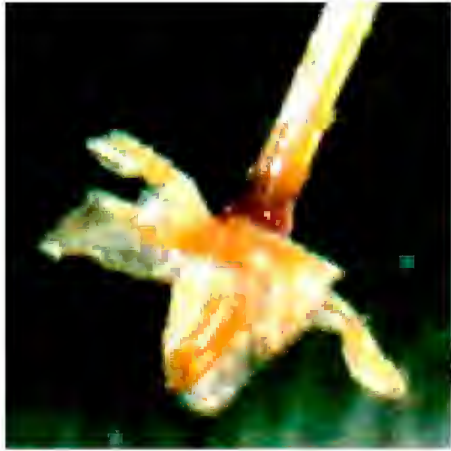
Details follow:



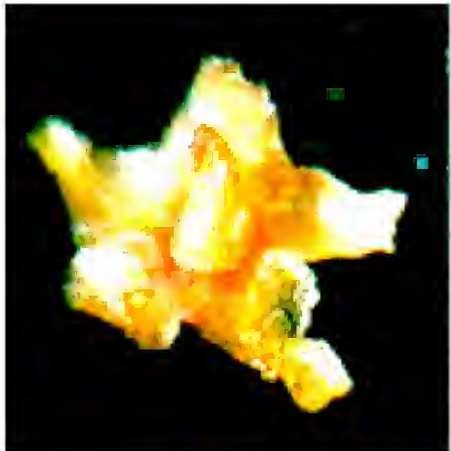
Pedicel enlarged about 16x. Curved, terete, glabrous 1.8 cm long, 0.04 cm in diameter.



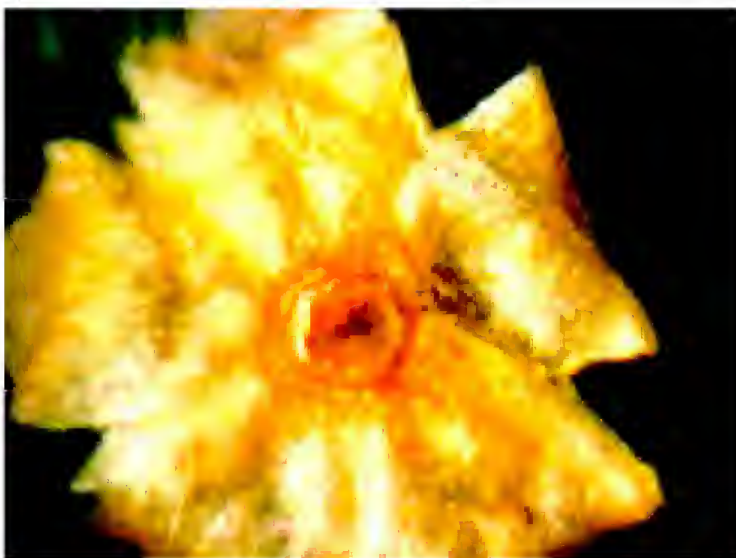
Outside of flower enlarged about 8x. Sepals do not reach the corolla sinuses, here dried and flared out from corolla surface which is glabrous.



Pedicel calyx and ovaries side view enlarged about 8x. Ovaries are narrow domed shape, 0.11 cm tall and 0.08 cm wide at abase pair, glabrous.



Top view of the calyx and ovaries enlarged about 8x. Sepals are glabrous inside and out, 0.13 cm long and 0.10 cm at the widest, overlap at the base about 1/4. There are faint ligules, sepal apex narrowly rounded



Corolla outer surface, glabrous, cut more than $\frac{1}{2}$ way, central collar thickened and convex.

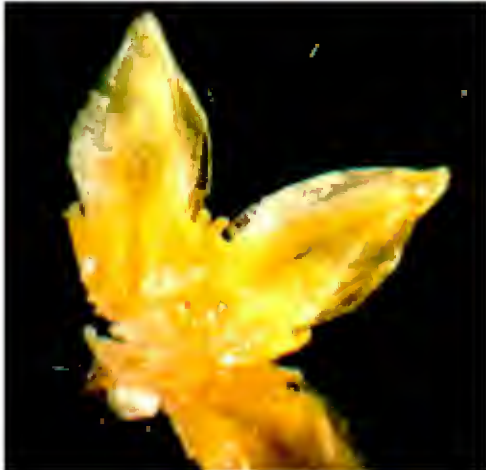
| | |
|----------------|---------|
| Sinus – sinus | 0.29 cm |
| Sinus – apex | 0.37 cm |
| Sinus – center | 0.22 cm |
| Apex – center | 0.55 cm |
| Widest | 0.33 cm |



Inside surface of the corolla enlarged about 8x. This surface is finely pubescent, lobe apex is acute and broadest in the middle.



Inside view of the flower enlarged about 8x. Coronal outer lobe exceeds the corolla sinus by a considerable amount, is narrowly rounded an elliptic shape, dorsal a little concave with a raised keep from apex to apex. Inner lobe is blunt dentate and does not reach the center. Anther wings at apex are rounded and protrude a little.



Lower surface of the corona, glabrous, channeled all the way to the central column, anther wings protruding, lower outer edges of scales are thin and sharp edged.

| | |
|---------------|---------|
| Apex – apex | 0.28 cm |
| Apex – center | 0.33 cm |
| Widest | 0.13 cm |
| Ret – ret. | 0.09 cm |
| Ret – center | 0.08 cm |
| Aw. – aw. | 0.15 cm |
| Aw. – center | 0.15 cm |



Pollinarium enlarged about 155x.

Pollinium

| | |
|--------|---------|
| length | 0.47 mm |
| widest | 0.20 mm |

Retinaculum

| | |
|----------|---------|
| length | 0.12 mm |
| shoulder | 0.11 mm |
| waist | 0.06 mm |
| hip | 0.08 mm |
| ext. | 0.06 mm |

Translators

| | |
|--------|---------|
| length | 0.12 mm |
| depth | 0.01 mm |

Caudicle

| | |
|------------|---------|
| bulb diam. | 0.08 mm |
|------------|---------|

Ret/Pol ratio 1:4.3

Translator/caudicle type: d/o

Pollinia inner end type: RT

Internodes: 6.5-13.4 cm long, some adventitious rooting. Nodes only slightly enlarged. Glabrous.

Leaf blades: opposite, petiolate, elliptic acuminate, 8.1 – 12.9 cm long x 3.3 – 4.2 at the widest, both sides glabrous, plinerved.

Petiole: 0.87 – 1.75 cm long twisted, glabrous.

Rachis: 2.19 cm long.

The following sheet was labeled *Hoya macgregorii* Schlechter but it is not that species. Outer lobes of corona on that species are not “breviter excises” briefly excised. Also the corolla is much different.

Reduced copy if the type sheet CAHUP #5297
Misidentified as *Hoya mcgregorii* Schlechter



Hoya litii Kloppenburg, Siar & Cajano 2015

ISSN 2329-7336

Hoya litii Kloppenburg, Siar, & Cajano sp. nova, holotypus #72240 (CAHUP) hic designatus. Epiphytica, volubilis, scandens, ramosa; caule ramisque filiformibus elongatis, flexuosis, teretibus, glabris, laxe foliatis; foliis; ellipticis vel ovato-ellipticis apiculatis-acutis, glabris, 5 plinervis, conspicuis; cymis umbelliformibus multifloris ca. 30, rhachis demum cylindrica elongata, pedicellis filiformibus gracilibus, glabris, 1.6 cm longis et 0.07 cm diametro; floribus ut videtur nevidus in genere mediocribus; calycis segmentis triangularibus, glabris, 0.12 cm longis et 0.14 cm latis ad basim, cum ligulae; corolla 5-fida rotata, extus glabra, intus aqualiter pubescenta circ. 1.10 cm diametiente companulatus, lobis late ovatis, acutis, circ. 0.35 cm longis; coronae apice acutis recurvatus, dorso concavus, intus sub-spatulatus, subtus canaliculatis; translator/caudicula typus p/o. Similis *Hoya albida* Kloppenburg, Siar & Cajano 2013, sed corolla diametiente companulatus 1.10 cm contrastre 0.92 cm et coronae lobus longior 0.20 cm contrastre 0.12 cm et pollinia longior 0.50 mm contrastre 0.25 mm; differt.

This hoyia is an epiphytic scrambling vine with elliptic to ovate elliptic leaves that have apiculate-acute apices, are glabrous, 5ply nerved, with many flowers (about 30) in a loose globose clusters, rachis cylindrical, pedicels slender, glabrous, 1.6 cm long and 0.07 cm in diameter whitish in color, with the sepals triangular, glabrous, 0.12 cm long and 0.14 cm wide at the base, ligules present; corolla 5 lobed, outside glabrous, inside evenly pubescent about 1.10 cm in diameter flattened, lobes broadly ovate, apex acute, about 0.35 cm long; corona apex acute and recurved slightly, dorsal concave, inner lobe dentate, below channeled. Translator/caudicle type d/o. The species is similar to *Hoya albida* Kloppenburg, Siar & Cajano 2013, but different in the corolla being larger (flattened 1.10 cm) versus 0.92 cm and the coronal lobes are longer 0.22 cm versus 0.12 cm measured apex to apex and the pollinia are also longer 0.50 mm versus 0.25 mm.

Named for the current director of the museum at CAHUP. Flowers via Monina Siar 4/8/2006. and photographed 4/9/2006.with a Olympus digital microscope 13 flowers in small zip bag, in Kew solution.



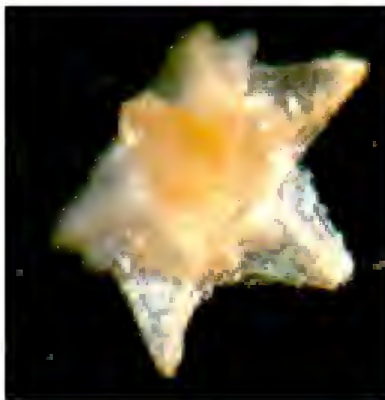
Pedicel: enlarged about 8x. Short, strict, terete, glabrous, with very fine surface granules 1.6 cm. long 0.07 cm. in diameter.



Flower side view enlarged about 8x. Calyx enlarged-round at base, surface granular. Sepals do not reach the corolla sinuses. Flower cupped, corolla lobes raises and apical area turned out slightly.



Outside view of the calyx enlarged about 8x. Sepals are triangular short, granulose surfaced, overlapped at the base slightly, centrally thickened edges hyaline, apex rounded (obtuse).



Inside view of the calyx and ovaries. Sepals inside are glossy glabrous, ligules are present at the base difficult to see, 0.12 cm. long, 0.14 cm at widest.

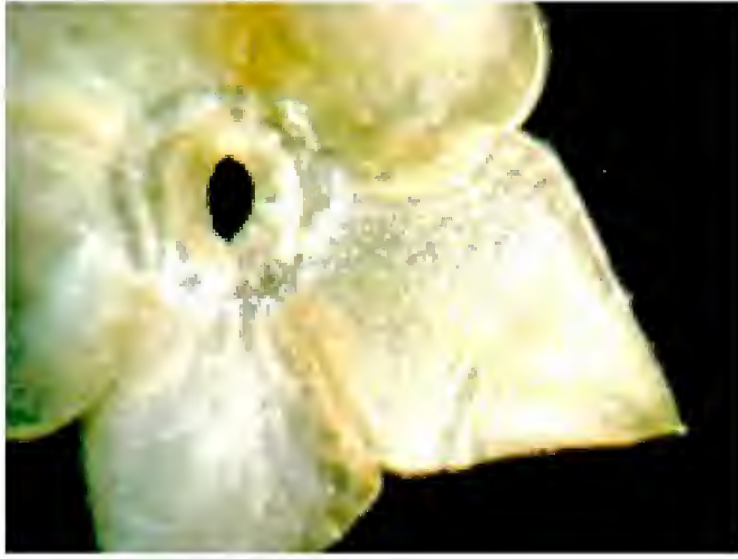
Ovaries short broad column, glabrous, 0.12 cm. tall and 0.09 cm. wide at pair base.



Outside surface of the corolla enlarged about 8x. Surface is glabrous, deeply cut, lobes are conduplicate at the sinuses all the way to the broadest portion. Center collar is a little thickened and convex.



Outside surface of the corolla at the lobe. Apex is acute lobe very broad and overlaps, conduplicate at sinus.



Corolla inside surface enlarged about 8x. Surface is finely pubescent except at the center where the column extends inward and sunken just out from this. edge not pubescent.

| | |
|----------------|----------|
| Sinus – sinus | 0.20 cm. |
| Sinus – center | 0.15 cm. |
| Sinus – apex | 0.45 cm. |
| Apex – center | 0.55 cm. |
| Widest | 0.38 cm. |



Skewed bottom view of the corona enlarged about 16x. All surfaces are glabrous and finely sulcate, diagonally on this surface. Lobes are channeled all the way to near the central column that is 0.5 cm. long. The lobes are puffed out below (full). Anther wings protrude a little and apex is rounded but not thick. Apices turn down slightly.



Bottom view of corona enlarged about 16x. channeling extends in to near the column at the outer limit it is sunken in to form a short concave area near the apex. Anther wings are scythe shaped so extend inward to the edge of coronal inner edges. Surfaces are here diagonally finely sulcate.



Inside view of the flower enlarged about 8x, coronal outer lobes reach the corolla sinuses. Flower cupped to surround a beautiful corona. Corolla inner surface finely pubescent and deeply cut. Coronal scales dorsal is concave, with a very slight central ridge. Scales are deep, anthers are slightly creped.



Top view of the corona enlarged about 16x. Outer lobe is subacute, inner lobes extended and near spatulate do not quite reach the center.

| | |
|-----------------|----------|
| Apex – apex | 0.20 cm. |
| Apex – center | 0.24 cm. |
| Widest (dorsal) | 0.10 cm. |
| Ret. – ret. | 0.07 cm. |
| Ret. – center | 0.07 cm. |
| Aw. – aw. | 0.13 cm. |
| Aw. – center | 0.13 cm. |



Pollinarium enlarged about 165x.

Pollinium:

| | |
|--------|----------|
| length | 0.50 mm. |
| widest | 0.14 mm. |

Retinaculum:

| | |
|----------|----------|
| length | 0.12 mm. |
| shoulder | 0.12 mm. |
| waist | 0.03 mm. |
| hip | 0.06 mm. |
| ext. | 0.04 mm. |

Translator:

| | |
|--------|----------|
| length | 0.09 mm. |
| depth | 0.04 mm. |

Caudicle:

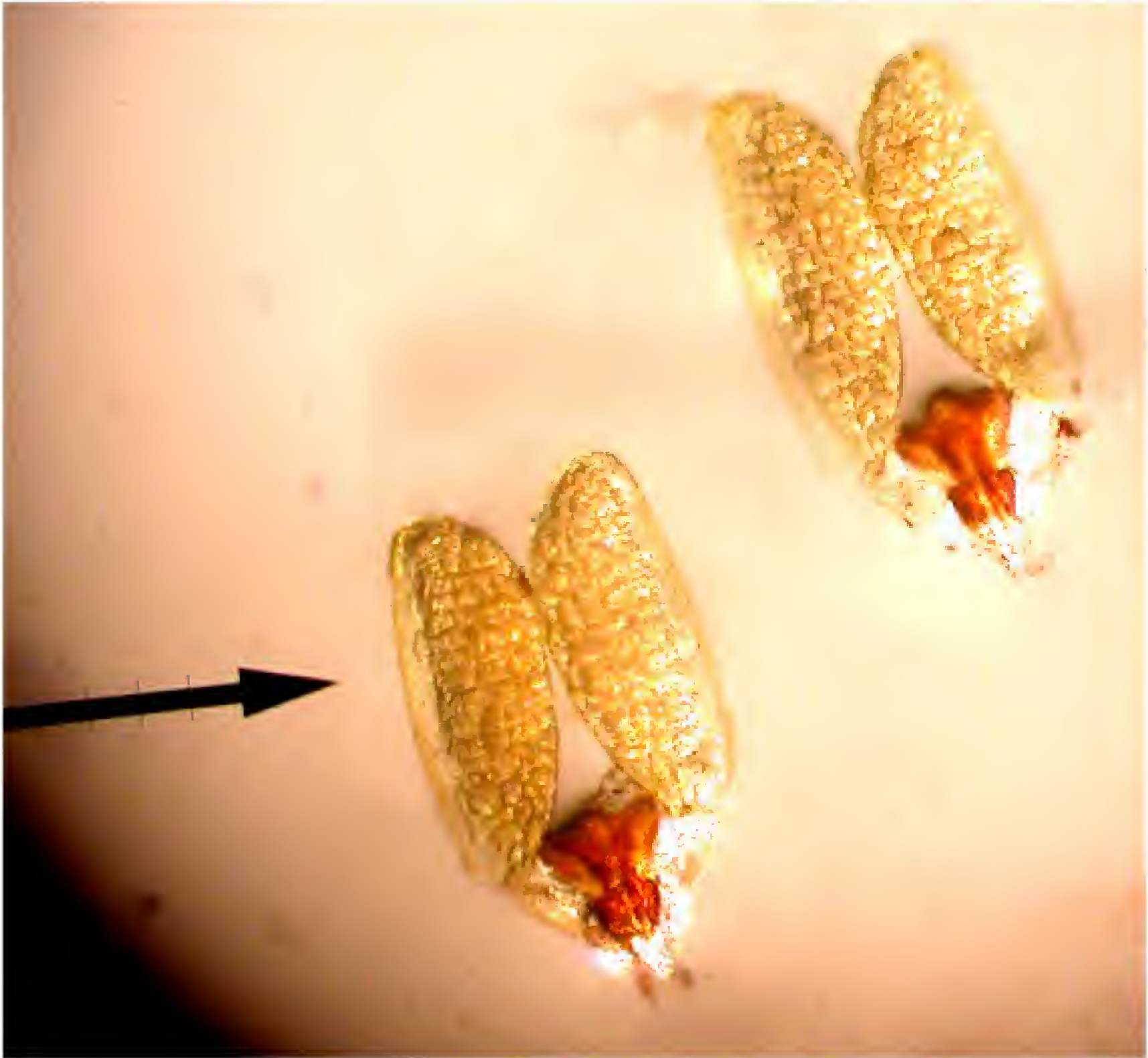
| | |
|------------|----------|
| bulb diam. | 0.04 mm. |
|------------|----------|

Ret.: pol. ratio 1:2.6

Translator/caudicle type: p/o

Pollinia inner end type: T

Retinacula type: HS but with unusual hips and shoulders



Another digital photo of 2 Pollinarium.

A vigorous climbing plant, epiphytic with opposite leaves. Collected in 2003 by Ann Cajano on Polilio Is. Philippines, April 2003 10 meters above sea level in secondary forest. Near a large boulder, near a cave in the coastal area of Sitio Putting Bato, Barangay Aluyon, town of Burdeos, Province of Quezon.

Internodes 6.5 – 9.5 cm. long.

Leaves: blade entire, coriaceous, glabrous, opposite, petiolate, ovate-elliptic to elliptic-lanceolate, upper surface glossy, under more pale and dull, apex acute–acuminate base cuneate to somewhat obtuse, 10.0 – 13.0 cm. long , 4.8 – 6.5 cm. wide, quintuplinerved very prominent above inner pair nearly reach the apex. Petioles 2.5-4.5 cm long, curved round, glabrous.

Leaf length (mature blades) in centimeters.

| <u>in centimeters</u> | <u>Width</u> | <u>Petiole length</u> |
|-----------------------|--------------|-----------------------|
| 1. 17.7 | 4.1 | 4.2 |
| 2. 12.7 | 5.2 | 5.3 |
| 3. 12.5 | 5.5 | 7.0 |
| 4. 11.0 | 5.5 | 4.6 |
| 5. 10.8 | 5.5 | 4.5 |
| 6. 11.4 | 5.0 | 6.0 |
| 7. 10.6 | 5.4 | 5.3 |
| 8. 10.9 | 5.6 | 5.5 |
| 9. 12.0 | 4.5 | 6.1 |
| 10. 12.3 | 5.0 | 4.6 |
| Mean: 11.59 | 5.13 | 5.31 |

Rachis: fasciculate. About 31 flowers per cluster.

Habitat: a Pendulous vine with semi-globose inflorescence. Vanilla fragrance.





The above pictures sent via E-mail from Monina Siar 17 April 2006



Ann's
Hoya
sp.
2006

Holotype sheet #72240 (CAHUP)



Hoya leticiae Kloppenburg, Cajano & Hadsall 2015

ISSN 2329-7336

Hoya leticiae Kloppenburg, Cajano & Hadsall sp. nova, holotypus #72342 (CAHUP) hic designatus. Dissimilis alius Acanthostemma sp. Folia differt et pollinarium retinacula et translata differt.

This new Acanthostemma section hoya species differs from any previous species in this section as the leaves are not like any other specie of this section and the pollinarium have retinaculum that are unique in several structural characters and also the translator type size is unique in this section. This new species is named in honor of the Herbarium curator at the Univ. of the Philippines, Los Banos, Laguna.

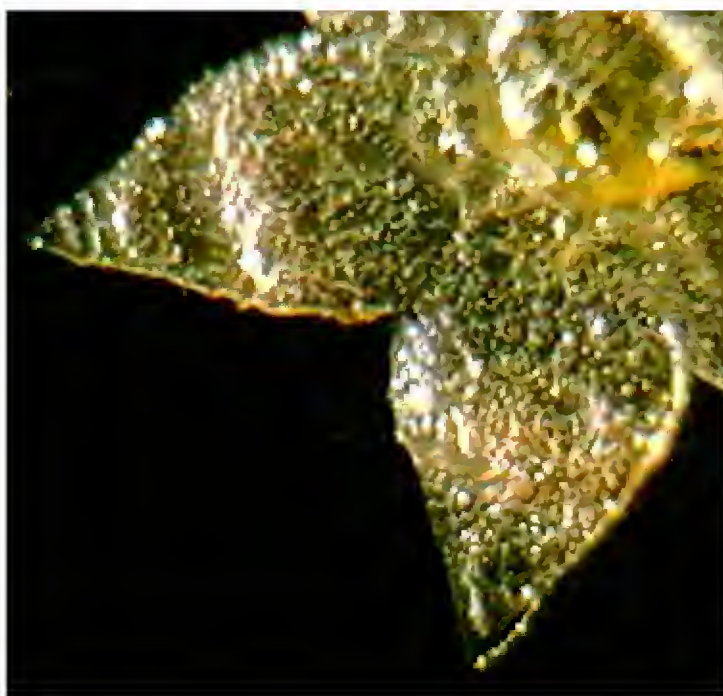
Details follow:



Pedicel: with calyx and ovaries, enlarged ca. 28x. The pedicels are short and curved of various lengths, 1.0 – 1.3 cm long and terete, glabrous, 0.05 cm in diameter.

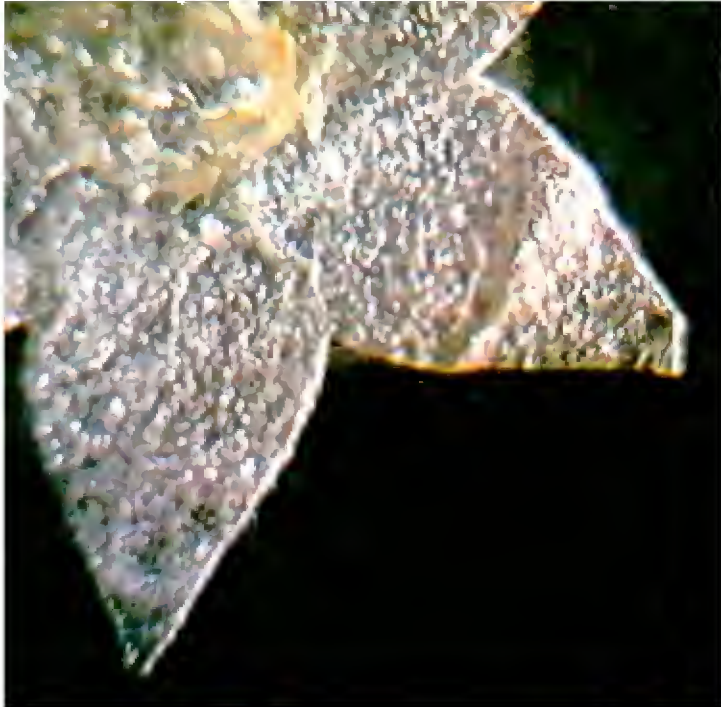
Calyx: sepals are thin glabrous. elliptic, with rounded apices, 0.10 cm long and 0.07 at the widest near the base, ligules at the sinuses.

Ovaries: columnar, glabrous, 0.10 cm tall and base pair 0.08 cm wide.



Corolla: ventral view flattened and enlarged ca. 13x. This surface is granulate, glabrous.

| | |
|----------------|---------|
| Sinus – sinus | 0.17 cm |
| Sinus – center | 0.17 cm |
| Sinus – apex | 0.22 cm |
| Apex – center | 0.53 cm |
| Widest | 0.17 cm |



Corolla: dorsal surface enlarged as above, the surface is pubescent slightly less at the lobe apices. Center slightly thickened.



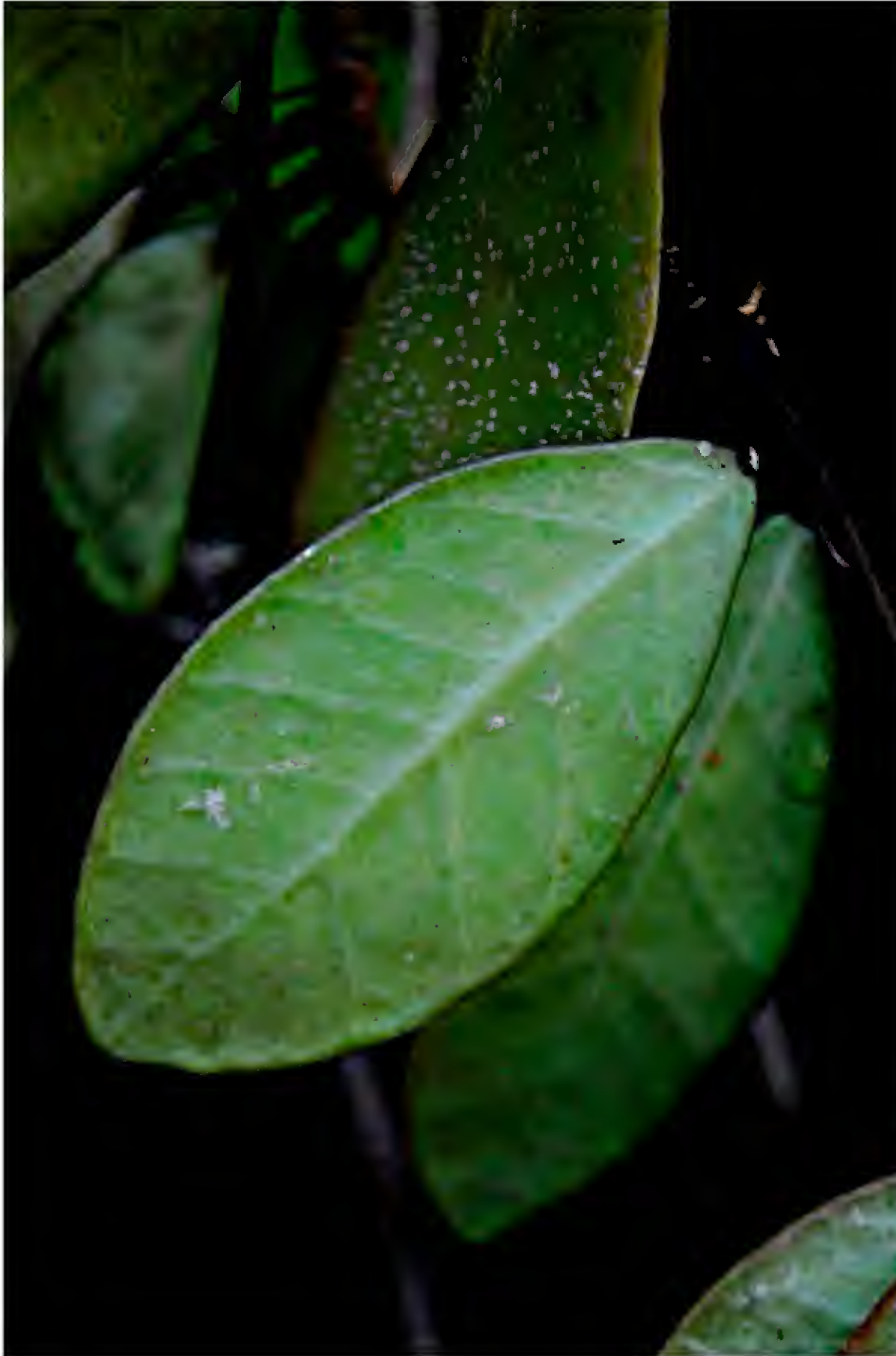
Corona: the inner lobes are raised and spatulate and do not reach the center so the anthers are exposed. Dorsal is slightly concave with a central linear keel and edges are rounded. The outer lobe apex is mostly obtuse with bilobes along the sides projecting 0.04 cm beyond the outer lobe apex. The bi-lobe apex form a cup above at the lobe apex.

| | |
|---------------------|---------|
| Apex – apex | 0.14 cm |
| Apex – center | 0.16 cm |
| Widest | 0.09 cm |
| Apex – bi-lobe apex | 0.18 cm |



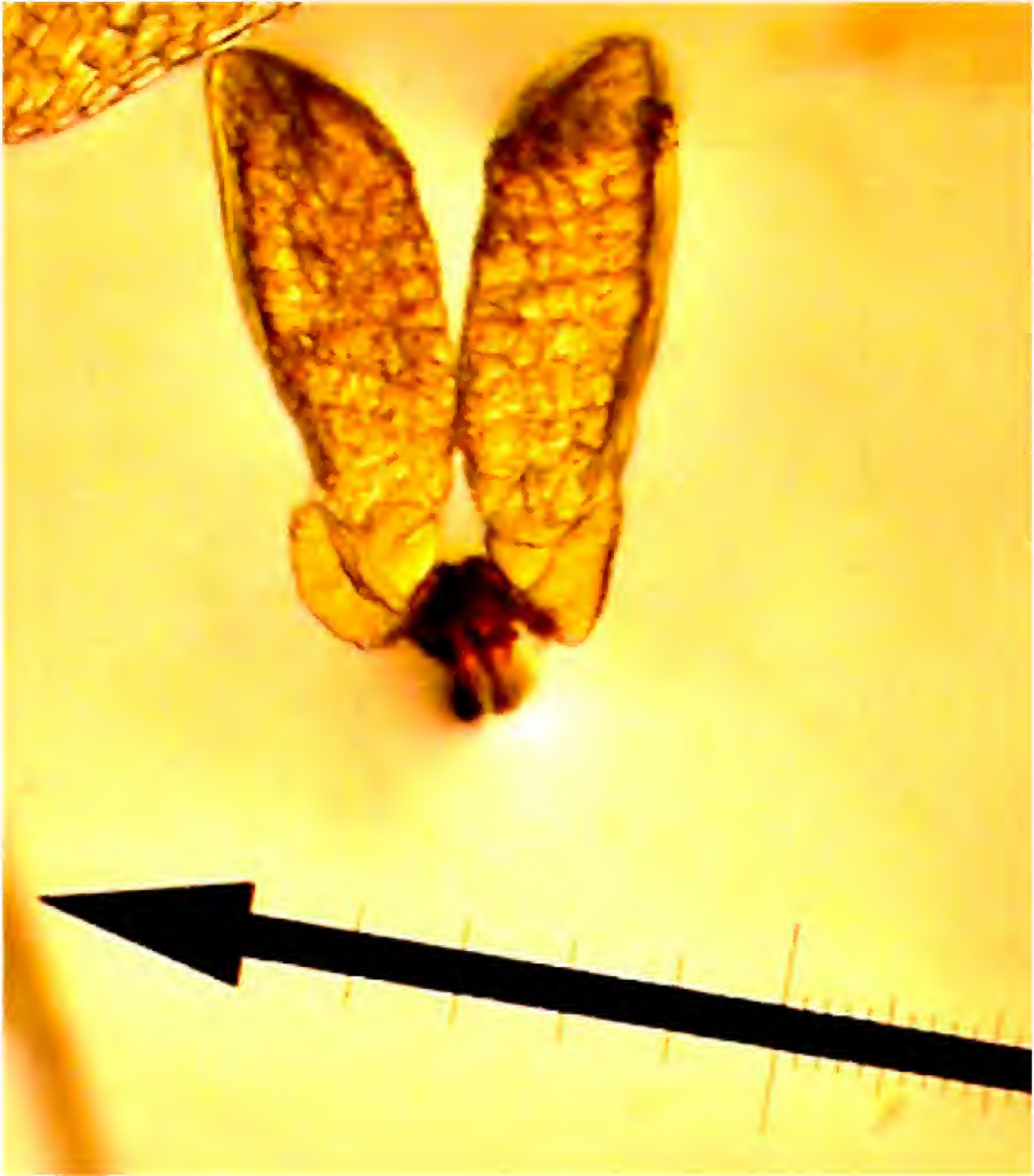
Cluster (picture) of live flowers taken by Ann Cajano. The corollas are revolute. The flowers form a flat cluster and contain about 15 flowers. Rachis about 4x more in diameter than the pedicels. Petiole about $\frac{1}{2}$ the diameter of the rachis and green, terete, glabrous.





Leaf photo by Ann Cajano, the blades are rather dull green, glabrous ovate with a sub-ovate base and obtuse apex, pinnate nerved with about 9 pairs. This is an unusual leaf for an Acanthostemma Section species of hoyas. Nerves at 45 degrees to the midrib.

The pollinium depicted below is unusual in many respects, to date there is no other species with a pollinium this small and with a translator type: fb/o. In addition this is the first hoyas species I have observed with bulbous ends on the legs of the retinaculum (the outer end). In addition the head of the retinaculum has two lighter colored linear round edged protrusions extending 0.04 mm down from the top these ends taper inward. The caudicles are clear and the pollinia have pollen structured pollen grains.



Pollinium enlarged ca. 320x.

Pollinium

| | |
|--------|---------|
| length | 0.24 mm |
| widest | 0.10 mm |

Translator

| | |
|--------|---------|
| length | 0.08 mm |
| widest | 0.03 mm |

Retinaculum

| | |
|----------|---------|
| length | 0.04 mm |
| shoulder | 0.12 mm |
| waist | 0.08 mm |
| hip | 0.09 mm |
| ext | 0.03 mm |

Caudicle

| | |
|-------------|---------|
| bulb. diam. | 0.04 mm |
|-------------|---------|

Translator/caudicle type: fb/o

Pollinia end type: T.....(tapered inward).

Reduced copy of the Holotype Sheet



Hoya edwinofernandoi Kloppenburg, Cajano & Hadsall 2015 ISSN 2329-7336

Hoya edwinofernandoi Kloppenburg, Cajano & Hadsall, sp. nova, holotypus #72239 (CAHUP) hic designatus. Acanthostemma sp. dissimilis cum coronae lobus bulbosa pellucidus. Aliquantum similes *Hoya anncajanoae* Kloppenburg & Siar 2008 sed calyx lobus grandior 0.20 x 0.25 cm contrastre 0.15 x 0.17 cm et corolla diametro complanatus 1.20 cm contrastre 1.70 cm

This new hoya species is unlike any other Acanthostemma hoya species in that the dorsal surface of the coronal lobes are bulbous, much like clear marbles. This species is rather close to *Hoya anncajanoae*, but the corolla flattened is smaller also the sepals are larger among other differences. It is the marble like corona center surfaces, like marbles that distinguishes it from any pervious hoya Acanthostemma section species. Details follow:

This new hoya species is named for Dr. Edwino Fernando formerly director of Makiling noted for Mountain Ecosystems and is a plant taxonomist.



Pedice: section enlarged ca. 20x, they are curved, terete, hirsute, 1.8 cm long and 0.15 cm in diameter. Base to calyx is tapered.

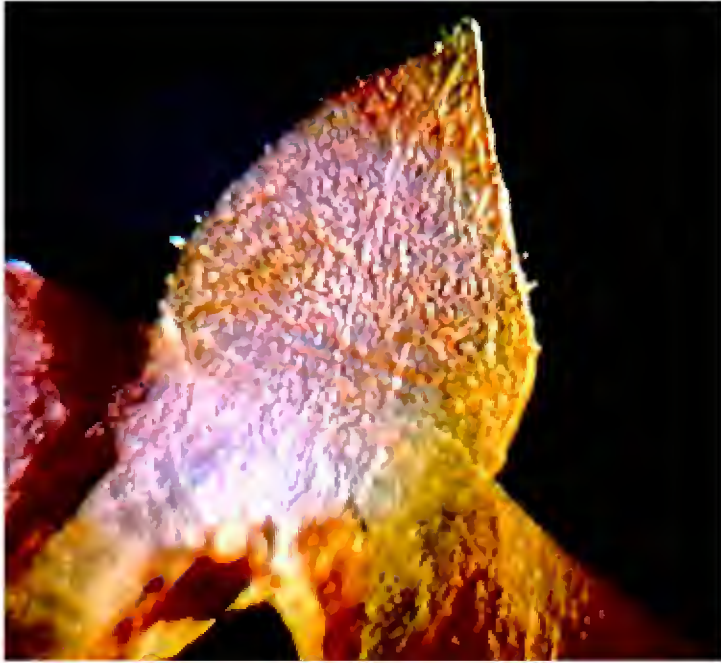
Calyx: outside surface enlarged ca. 8x, the sepals are granulate on this surface with ciliate edges.



Calyx: below inside, dorsal view enlarged as above the sepals are glabrous on this surface, and are sub-ovate, 0.20 cm long and 0.25 cm at the widest, the base overlaps about 1/3

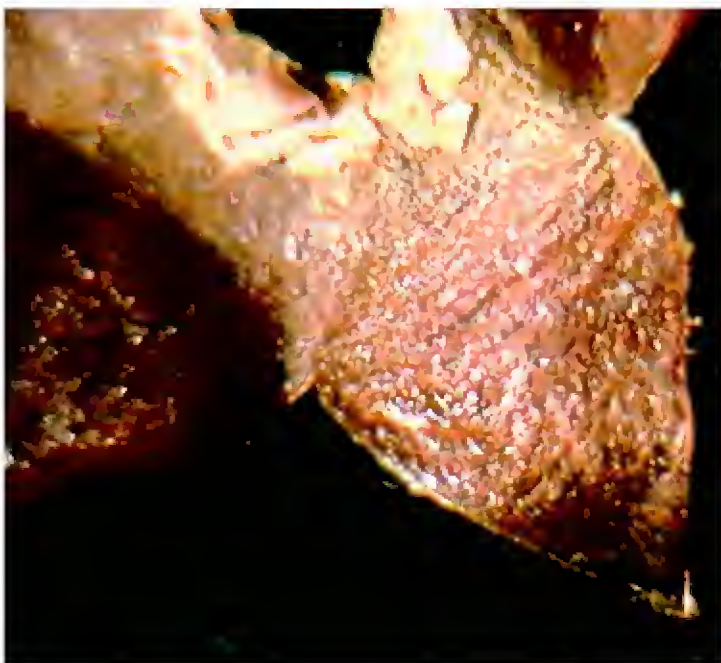


Ovaries: are nearly columnar, glabrous 0.15 cm long and 0.12 wide at base of the pair. Tips are bent inward "kissing".



Corolla: ventral surface flattened enlarged ca. 13x, the surface is granulate.

| | |
|----------------|---------|
| Sinus – sinus | 0.38 cm |
| Sinus – center | 0.33 cm |
| Sinus – apex | 0.43 cm |
| Apex – center | 0.65 cm |
| Widest | 0.40 cm |



Corolla: enlarged ca. 16x, this surface is pubescent except for the apical acute area. Normally the corollas are semi revolute (see live flower pictures following below).



Corona: ventral surface about 17x, the surfaces are glabrous, the lobes are channelled and do not appear to be sulcate. Center column is short surrounded by bulbous protrusions.



Corona: dorsal surface cropped from a photo below of a living flower enlarged ca. 12x. In the living state the outer lobes are bulbous with short bi-lobed outer apex. The inner lobes are narrowly spatulate and do not reach the center. Anther wing apices are broad rounded not protruding from the sinuses surfaces are glabrous. Bi-lobed extensions extend only 0.05 cm or less

| | |
|--------------------|--------------|
| Apex – apex | 0.27 cm |
| Apex – center | 0.30 cm |
| Apex – outer end | 0.32 cm |
| Widest | 0.15 cm |
| Ret. – ret./center | 0.07/0.07 cm |
| Aw.-aw./center | 0.27/0.25 cm |

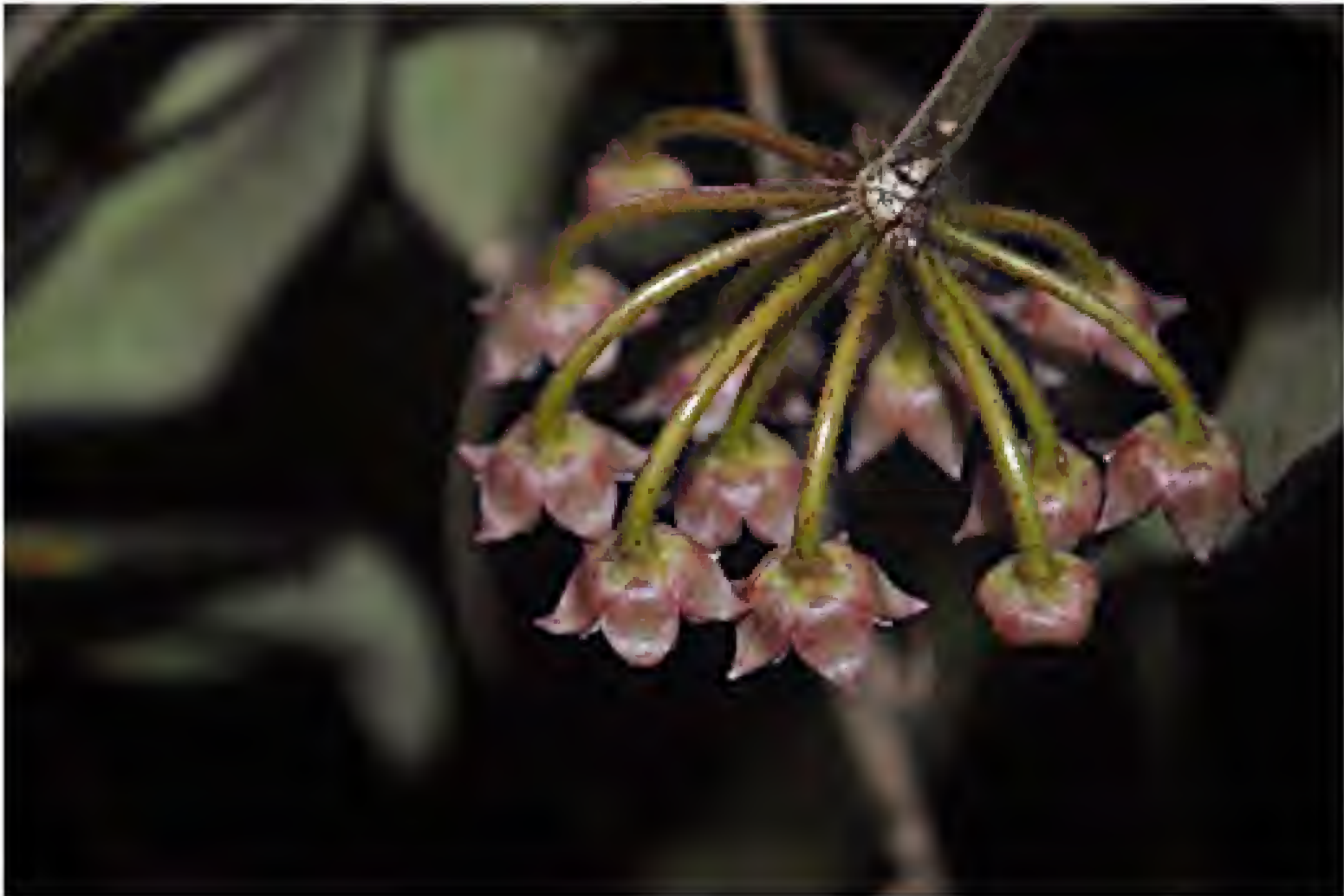
Pollinarium enlarged ca. 250x.



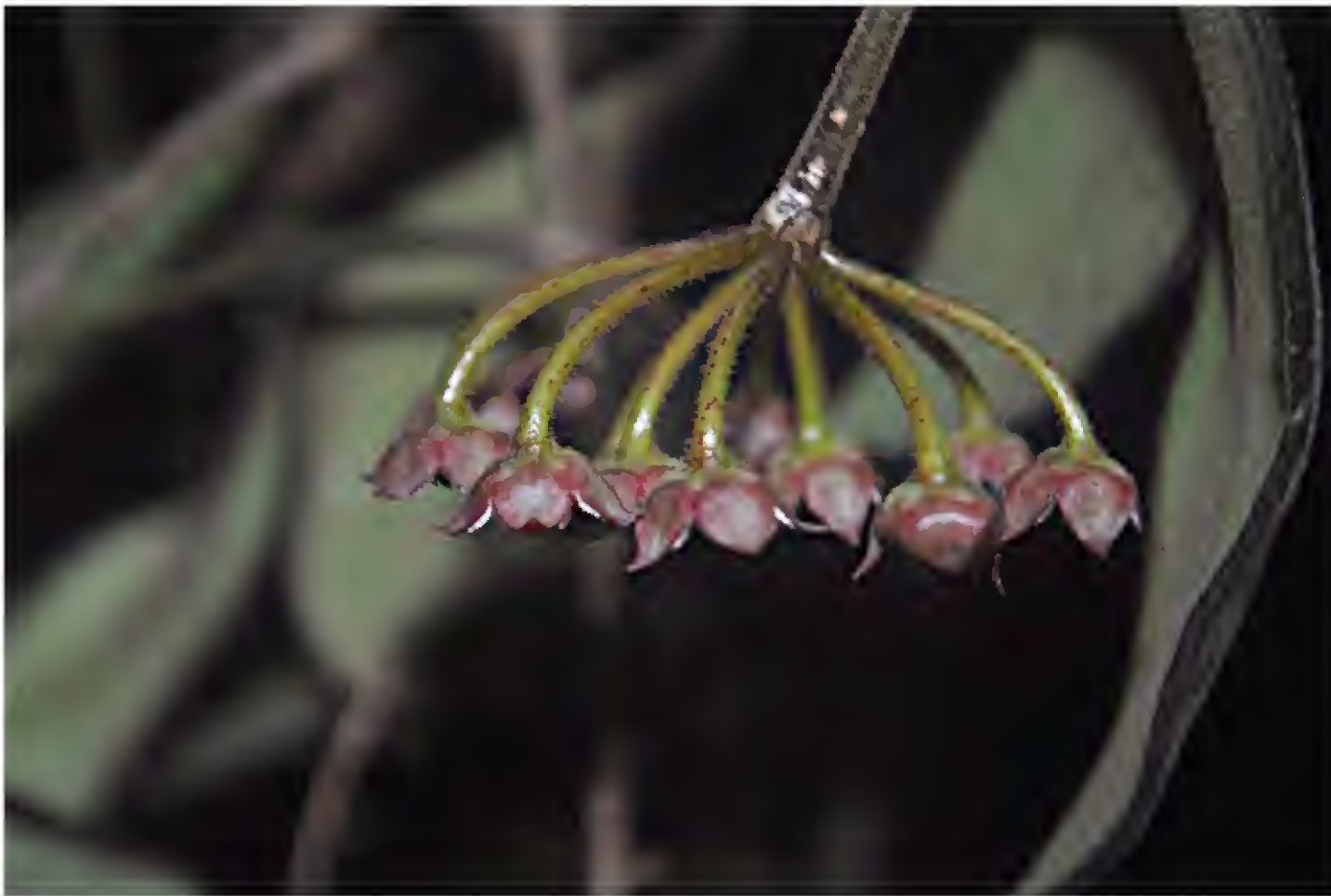
| | |
|----------------------------|----------------|
| Pollinium | |
| length | 0.53 mm |
| widest | 0.25 mm |
| Retinaculum | |
| length | 0.12 mm |
| shoulder | 0.12 mm |
| waist | 0.09 mm |
| hip | 0.10 mm |
| ext. | 0.05 mm |
| Translator | |
| length | 0.24 mm |
| widest | 0.12 mm |
| Caudicle | |
| bulb top | 0.10 cm |
| Translator/caudicle | |
| type: fb/cw | |
| Retinacula | type: S |
| (shield) | |

Pollinia inner end type: R (rounded)

Photos below by Mary Ann Cajano the collector of this new hoya species. Designated AC Fuzzy.



About 14 flower per cluster



Reduced copy of the Holotype sheet #72239 (CAHUP)



Hoya williamoliveriana Kloppenburg, Cajano & Hadsall 2015

ISSN 2329-7336

Hoya williamoliveriana Kloppenburg, Cajano & Hadsall sp. nova, holotypus 72000 (CAHUP) hic designatus: Isotype 6675 (CAHUP). Section Acanthostemma (Blume) Kloppenburg, similis *Hoya wayetii* Kloppenburg in Fraterna 1993:2:9-10, folia forma similes sed pedicilli pubens differt et corolla complanatam similaris ampulitudine sed parvior 1.24 contrastre 1.60 cm, calyce extus puberulas, differt.

This new species has leaves similar to those of *Hoya wayetii* Kloppenburg 1993, the pedicels however are pubescent as are the ventral surfaces of the calyx lobes and the corolla flattened is smaller 1.24 cm vs. 1.60 cm among other differences.

This hoyia species from the Philippines was collected by Mary Ann Cajano from the island of Polillo. Miss Cajano is the director of the National Herbarium at the University of the Philippines, Los Banos. (UPLB). The herbarium designation is CAHUP.

This beautiful hoyia species is named for Dr. William L. R. Oliver, an Englishman, who devoted his entire professional life studying the conservation biology of threatened mammals, birds, etc. both wild and in captivity. In 2013, he received the most prestigious Achievement Awards given by the Balipara Foundation (India) for his efforts in preserving the extinction of *Porcula salvania*, the pigmy hog, one of the world's most endangered species.

As founding director of the Philippine Biodiversity Conservation Program (PBCP), he has been actively involved in various conservation programs. Likewise, he has illustrated several Philippine vertebrates in wildlife conservation posters "Sa Philipinas Lamang"

Below are photo-micro-pictures with detailed measurements and comments:



Pedicel: section with calyx attached enlarged ca. 21x. They are curved of various lengths 1.3 cm to 3.2 cm long, 0.07 cm in diameter, with scattered hair cells most bent apically.

Calyx: base is tapered. Sepals are sub triangular ciliate, 0.23 cm long and 0.16 cm at the widest, ventral surfaces hirsute, dorsal slick and glabrous. No ligules observed.

Ovaries: dome shaped, glabrous, surface finely granulate, 0.12 cm tall and base pair 0.07 cm wide, apex with circular lip like ends.

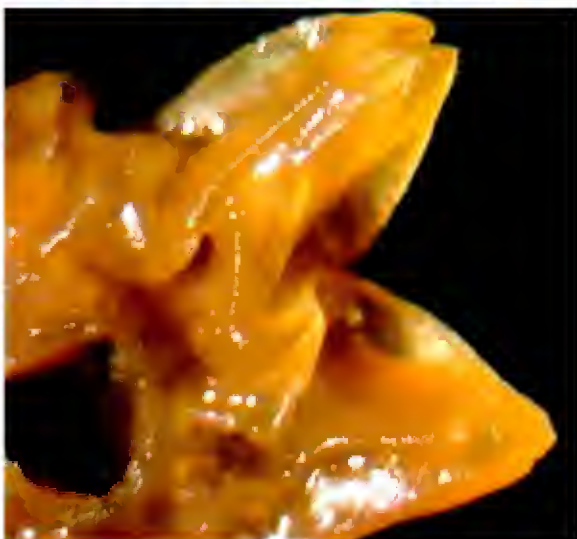


Corolla ventral surface enlarged ca. 10x, this surface is glabrous. At anthesis it is revolute here the glabrous apices are turned under.

| | |
|----------------|---------|
| Sinus – sinus | 0.32 cm |
| Sinus – center | 0.25 cm |
| Sinus – apex | 0.42 cm |
| Apex - center | 0.62 cm |
| Widest | 0.37 cm |



Corolla dorsal surface enlarged as above, this surface is pubescent except for the apical ends near the apex. Center slightly thickened and also raised slightly. Lobes are cut more than half way, corolla flattened 1.24 cm in diameter.

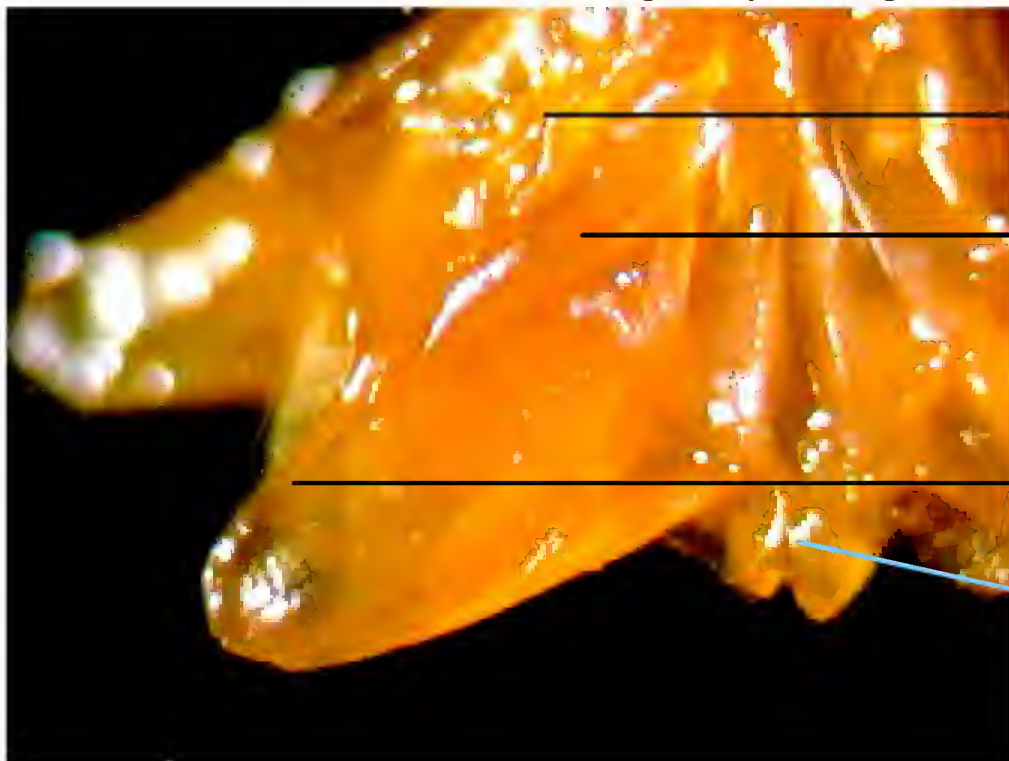


Corona: portion of ventral surface enlarged ca. 19x, all parts are glabrous the lobes are channeled and diagonal sulcate, there the edges are narrowly rounded and the inner ends are curved under and modified to the anther wing cleft, unusual and bulbous edges. I have never observed this in another species. The central column is very short with some bulbous projections meeting the lobe inner projections around it, this leaves a hollow opening at the channel inner end.



Corona dorsal surface enlarged ca. 21x, The inner lobes are raised and spatulate above the center (anthers), surfaces are glabrous. The dorsal surface is concave with rounded edges and a central raised linear area, tapering more narrow to the outer apex surrounded on the sides by the bi-lobes which touch at the outer apices.

Corona outer dorsal lobe greatly enlarged, this is a complex structure.



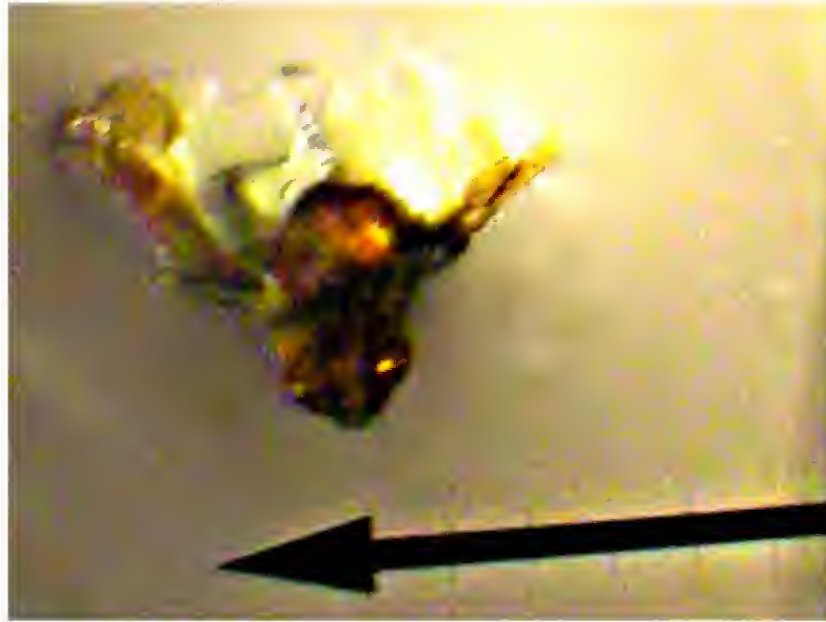
Complex dorsal lobe structure with central humps and outward rounded edges.

Outer lobe apes, dorsal sloped downward and very narrow.

Anther wing apex with bulbous rounded ends.

Coronal measurements:

| | |
|-----------------------|---------|
| Apex – apex | 0.32 cm |
| Center- apex | 0.34 cm |
| Apex – bi-lobe ends | 0.35 cm |
| Center – bi-lobe ends | 0.37 cm |
| Widest dorsal | 0.12 cm |
| Ret. – ret. | 0.05 cm |



Both photos of the pollinarium enlarged near 140x.

Pollinium

| | |
|--------|---------|
| length | 0.48 mm |
| widest | 0.20 mm |

Retinaculum

| | |
|----------|---------|
| length | 0.13 mm |
| shoulder | 0.10 mm |
| waist | 0.06 mm |
| hip | 0.08 mm |
| ext. | 0.02 mm |

Translator

| | |
|--------|---------|
| length | 0.15 mm |
| wide | 0.02 mm |

Caudicle

| | |
|------------|---------|
| bulb diam; | 0.06 mm |
|------------|---------|

Type: C (clear)

Translator/caudicle type: l/cw ? **Pollinia inner end type:** F **Retinacula type:** R

Habitat: A pendulous vine with semi-globose inflorescence, collected near a large boulder near a cave located in an area at Stio Pating Bio, Barangy Abyon, town of Burdeos, Quezon, Philippines. 20 m asl altitude.

Leaves: linear-lanceolate, apex acute and base cuneate, margins smooth and dark green, thick, glabrous, leathery, abaxil surface green, adaxial surface light green. Visibly enervis, but pinnate, dorsal concave.

Leaf measurements:

Cajano, Polillo

| Leaf sample | Length (cm) | Width (cm) | peduncle (cm) |
|-------------|----------------|---------------|------------------|
| 1 | 6.8 | 1.1 | 1.1 |
| 2 | 9.1 | 1.5 | 1.1 |
| 3 | 8.0 | 1.3 | 1.0 |
| 4 | 7.9 | 1.2 | 1.0 |
| 5 | 7.9 | 1.3 | 1.1 |
| 6 | 7.5 | 1.0 | 1.1 |
| 7 | 3.2 | 1.0 | 0.8 |
| 8 | 3.8 | 1.0 | 1.0 |
| 9 | 4.4 | 1.0 | 0.7 |
| 10 | 6.7 | 1.0 | 1.0 |
| Range | 9.1-3.2 | 1.5-1.0 | 1.1-0.7 |

Photos from living plants follow:



A Section Acanthostemma Hoya flower cluster of about 24 flowers. Stems with adventitious rooting, leaves cupped and long and narrow, edges rounder and darker green as with **Hoya wayetii** Kloppenburg 1993.



Photo reduced of the type sheet at (CAHUP).
Holotype #72000 (CAHUP)



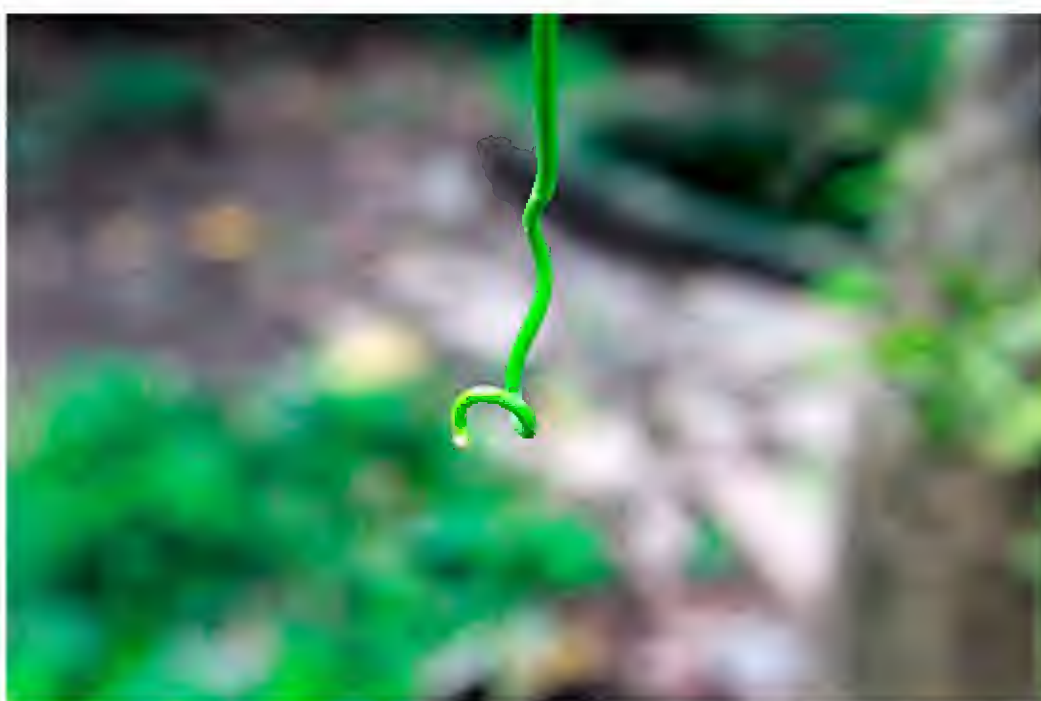
Sarcostemma malampayae Kloppenburg, Cajano & Hadsall 2015
ISSN 2329-7336

Sarcostemma malampayae Kloppenburg, Cajano & Hadsall sp. nova, holotypus 32340 (CAHUP) hic designatus, species aphyllus, cauli terete, glaber, globosus, cellulae chlorophyllo. Planta epiphytica, scandens, herba omnino glabra, ramulis crassis 0.5 cm. diametro, pedunculo usque 2.3 cm. longo et 0.08 cm diametro, pedicellis tenuiter filiformibus 0.47 cm. longis et 0.05 cm diametro; calycis segmenta 0.09 cm. longis ovate-triangulara, obtusiuscule, extus granulatis intus glabra; corolla rotata, usque ad tertiam partem basilem 5-fida, lobis ellipticis, ventralis glabra, intus pubens, 0.80 cm. diametro complamatus; corona centre tholiformis; coronae stamineae lobis intus pertenuis spatulatus, supra concavis, 0.11 cm. longis 0.09 cm. latis; exterior lobis cupulis.

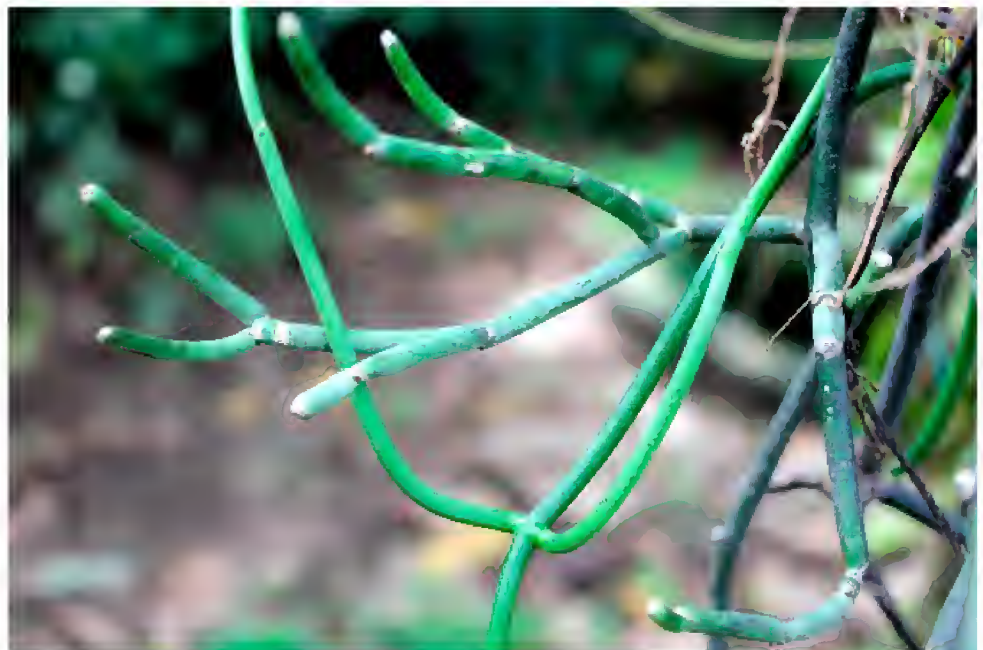
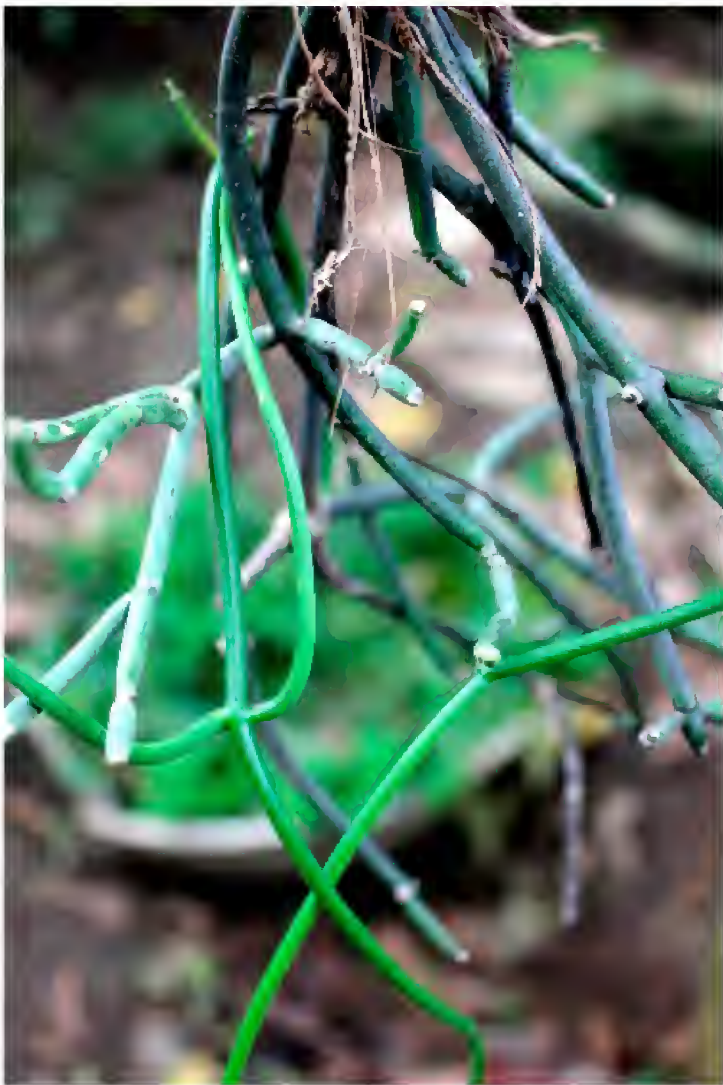
This new species is leafless with terete stems are round, glabrous green with chlorophyll. Plant epiphytic, trailing, branches thick 0.5 cm. in diameter, smooth and glabrous; peduncles at least 2.3 cm. long and 0.08 cm in diameter; pedicels narrowly threadlike 0.47 cm. long; segments of the calyx 0.09 cm. long ovate-triangular, somewhat obtuse, outside granulate and inside glabrous; corolla rotate, elliptic in shape, glabrous on both surfaces, 0.80 cm. in diameter when flattened, lobes of the staminal corona center is dome shaped, dorsal lobes are 0.11 cm long and 0.09 at the widest (near outer apex) concave outer lobe is cup shaped.

This new species is named for the Malampaya Organization, since they funded the collection trip to Mindoro Island, Philippines, where this species was collected by Ann Cajano and others.

Passport species with no leaves, Ann Cajano July 2013



Photo's of the plant and flowers by Ann Cajano, collected from Mindoro.



Photos of parts, comments and measurements follow:



Rachis on a section of peduncle, enlarged ca. 22x. The peduncle is 2.3 cm long and 0.08 cm in diameter. Measured from a jointed area, it may be much longer maybe 2x. See photo below. Rachis indicates first bloom at left, is bracteate with ciliated edges at top right is a new bud forming.



Peduncle: jointed area referred to above. This is a new structure to me maybe new peduncles forming or new pedicel areas ? Note the same structures on the pictures of living leafless stems taken by Ann Cajano above.



Pedicel base with calyx and ovaries visible, enlarged ca. 36x. The pedicel is curved, terete, glabrous 0.47 cm long (unusually short and 0.05 cm in diameter).

Calyx has a tapered granulate base, sepals outside are granulate, with a as light basal overlap, slick glabrous inside apices narrowing rounded, shape is sub-linear, 0.09 cm long an 0.15 cm at the widest.

Ovaries are flask shaped apex is flat, surfaces glabrous, 0.15 cm tall and base pair 0.03 cm wide.



Flower on pedicel enlarged ca. 10x. The pedicels are very short, curved and glabrous, largest at peduncle and below the corolla, Here you can see the corolla lobe shape broad at the base and tapering out to a narrower apex. they are very deeply cut.



Flower dorsal view enlarged as above, the corona is a globose cluster, dome shaped, pollinia very near the coronal center. Inner lobes are broadly spatulate curved over dome and very thin, outer portion curves down over the dome sides and has a broad cup shaped rounded end as near as I can determine from these preserved flowers.



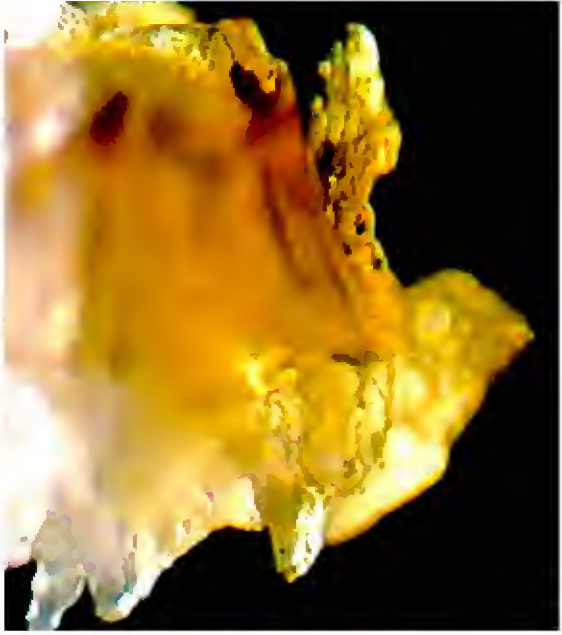
Corolla: enlarged ca. 14x. They are very thin textured, glabrous on both surfaces, difficult to work with, appear to be ovate with acute apices, center more thickened.

| | |
|----------------|---------|
| Sinus – sinus | 0.12 cm |
| Sinus – center | 0.10 cm |
| Sinus – apex | 0.35 cm |
| Apex – center | 0.40 cm |
| Widest | 0.20 cm |

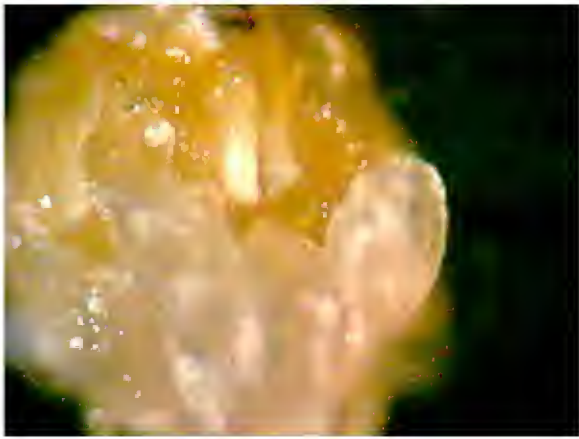


Corona enlarged ca 36x, difficult to work with my best determinations are:

| | |
|----------------------|----------------|
| Apex – apex | 0.11 cm |
| Widest at outer apex | 0.09 cm |
| Ret – ret/center | 0.05 / 0.03 cm |
| Aw. – aw./center | 0.08 / 0.10 cm |



Corona side view enlarged ca. 40x. Near the top are the dark retinacula (2 showing) than to the right a coronal lobe top pulled away from the crown here but with a rounded end and thin texture downward almost vertical is the rest of the lobe ending in a turned up cup line rounded end. One lobe between the two retinacula a blurred here in the photo, hard to make an exact determination of their exact shape.



Another view of the corona side greatly enlarged. In the top center is the anther channel with the two sides thickened with rounded ends below right and left is what I presume are the rounded cupped ends is the coronal lobes, thicker in texture than the inner lobe portions.



A photo of the corona in the corolla enlarged ca. 40x. I am assuming my interpretation of this small structure is correct. Examining a live flower under magnification may prove otherwise. The thin corolla flared out at the picture bottom and behind the corona.



Pollinaria enlarged ca. 100x.

Pollinium

| | |
|--------|--|
| length | 0.18 mm |
| widest | 0.10 mm at inner end (closest to crown center) |

Retinaculum

| | |
|----------|---|
| length | 0.19 mm |
| widest | 0.09 mm |
| base end | 0.05 mm the retinacula may be twisted on the axis. It appears to be so to me. |

Caudicle

| | |
|--------|--|
| length | 0.15 mm to the expanded cup at the narrow end of the pollinium, this cup is 0.05 mm long so overall length is 0.20 mm. |
|--------|--|

A Genus of at least 35 species of sub-shrubs or vines in tropical and sub tropical India, Africa and Malaysia (now in the Philippines). The genus is close to the Genus Sacamone.

References:

1. See references on the internet on Google or Wikapedia etc.

A reduced Copy of the Holotype Sheet

